Transporting Gas Cylinders Safely

BOC
A Linde company

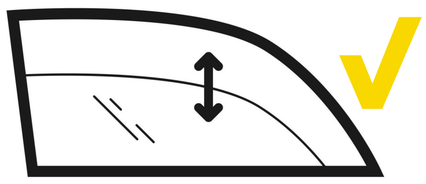
SPW

Passenger Vehicles with No Constant Ventilation

(ie. Passenger Cars, SUV's)

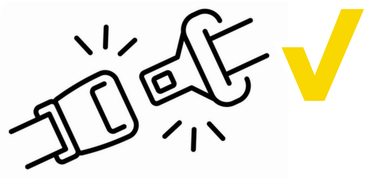
When transporting gas cylinders in vehicles, the following regulations in accordance with Australian Dangerous Goods Code sec 8.1 and NTC Load Restraint Guide must be followed:

Required Conditions



1 Keep windows open to promote ventilation.

2 Do not leave cylinders in car for long periods at a time.



3 Restrain cylinders upright securely in place to avoid cylinders moving around.

Use of open vehicles or trailers are highly recommended,
if using enclosed vehicles please **follow the safety instructions**.

- ✗ Do **NOT cover** the gas cylinders with a **tarpaulin**.
- ☐ Use appropriate equipment to lift/remove the cylinder.
- ✗ Do **NOT drop** the cylinder or submit to shock.
- ☐ **Ensure the valves are closed** before transporting the cylinder
- ☐ Beware of leakage.
- ☐ Information on the hazards can be found on the cylinder label.
- ✗ **Smoking is prohibited** while loading/ transporting/unloading the cylinders

In case of emergency contact: **000**

This poster is intended to provide general safety information, comprehensive safety guidelines are available at www.boc.com.au

Acceptable Quantities

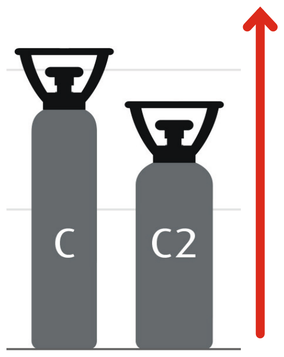
1×

LPG (Class 2.1) upto 9 kg

Secure **upright ONLY**

OR

2×



B, C, or CL size (Class 2.2)

Secure **upright ONLY**

OR

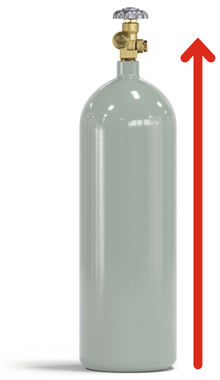
1×

D size
Inert gas (Class 2.2)
(ie. Oxygen, Argon, Air, Nitrogen, Helium)

Secure **upright ONLY**

OR

1×



CO_2, CO_2 Liquid, CO_2 mixes upto 10 kg

Secure **upright ONLY**

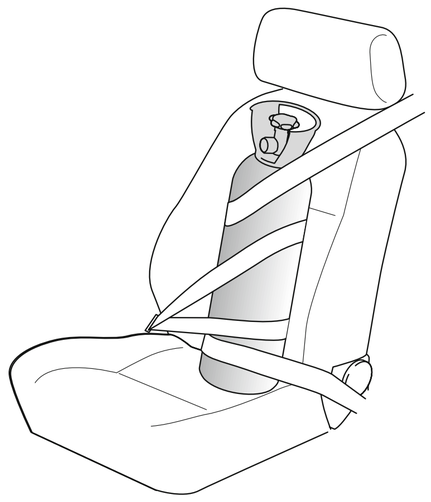
NEVER

Acetylene

Arrange delivery

Load Restraint Examples

Secure crate within vehicle



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Open Non Rigid Sided

(ie. Ute, Tray, Trailer)

When transporting gas cylinders in vehicles, the following regulations in accordance with Australian Dangerous Goods Code sec 8.1 and NTC Load Restraint Guide must be followed:

Required Conditions

- All cylinders must be secured and transported in accordance with the ADG Code
- This includes large industrial cylinders (F and G sizes) as well as 45 kg LPG cylinders.

- Liquid and flammable gases **MUST** be secured and transported in an **upright position**, vapour cylinders may be transported horizontally if secured as per load restraint requirements.

Note

Some cylinder products can weigh up to 85 kg. Special care must be taken when handling. BOC/SPW recommends the use of manual handling aids such as trolleys and assisted lifting as required.

Please follow the safety instructions.

- ✕ Do **NOT cover** the gas cylinders with a **tarpaulin**.
- ☐ Use appropriate equipment to lift/remove the cylinder.
- ✕ Do **NOT drop** the cylinder or submit to shock.
- ☐ **Ensure the valves are closed** before transporting the cylinder
- ☐ Beware of leakage.
- ☐ Information on the hazards can be found on the cylinder label.
- ✕ **Smoking is prohibited** while loading/transporting/unloading the cylinders

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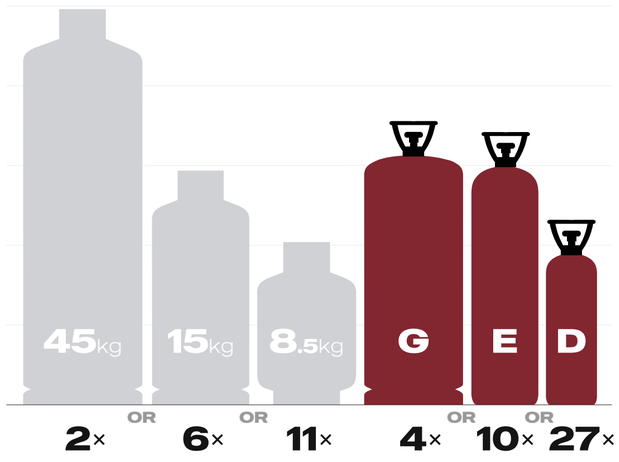
Acceptable Quantities

Flammable (Class 2.1)

Maximum 250 litres (water capacity)



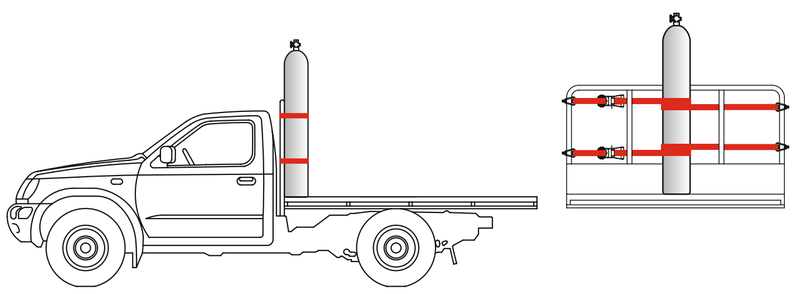
Inert Gas (Class 2.2)

Maximum 500 litres
(water capacity of any inert gases (Class 2.2) (i.e. Oxygen, Argon, Compressed Air, Nitrogen, CO_2, and Helium).

Flammable and Inert Gas (Class 2.1 and Class 2.2)

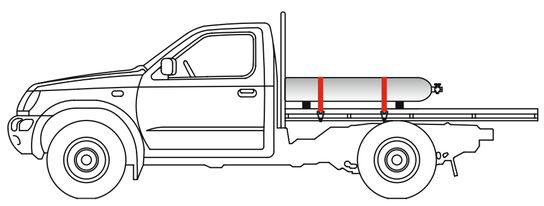
- Maximum 250 litres (water capacity)
- Combination of Class 2.1 and Class 2.2 gases may be carried totalling 250 litres (water capacity)

Load Restraint Methods



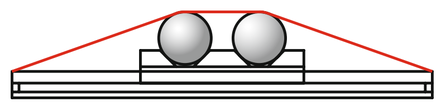
Vertical to Headboard

- Two sets of opposed loops
- Horizontal straps must be anchored straight back.

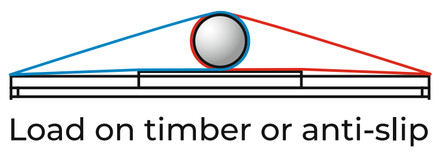


Horizontal

- Cylinder lengthways along the vehicle
- Cylinder valve facing **AWAY** from headboard



A Loaded on pallet with fixed chock sideways, using two tie-down straps loops.



B Load on timber or anti-slip matting, with two sets of opposed loops.

Placards - ONLY apply to volumes EXCEEDING the limits of open, non-rigid sided vehicles.

Placarding **ONLY** applies when the following volumes are transported (Excluding aerosol):

Flammable gas
≥ 250 Litres

Load containing **at least 250 litres** (water capacity) of dangerous goods, **ANY** of which are flammable gas (Class 2.1).

Dangerous Goods
≥ 500 Litres

Load of dangerous goods of **at least 500 kg (L)** (with **NO** flammable gas).

Bulk transport
≥ 1000 Litres

Bulk load of dangerous goods of **at least 1000 kg (L)**.

Mixed gas
≥ 250 Litres

Load containing **at least 250 litres** (water capacity) of Mixed Classes.

- Placard loads must carry the emergency equipment in accordance with the ADG Code.
- It you are unable to provide safe restraint/transportation of cylinders BOC/SPW can arrange delivery.

FD 26613 FDAUS 0725

Transporting Dry Ice Safely

BOC
A Linde company

SPW

Transporting Dry Ice in enclosed vehicles should be avoided;
where possible, delivery of Dry Ice should be arranged with BOC/SPW
When transporting Dry Ice from BOC/SPW stores
the following conditions should be met to ensure safety and compliance with legislation.

In case of emergency contact: **000**

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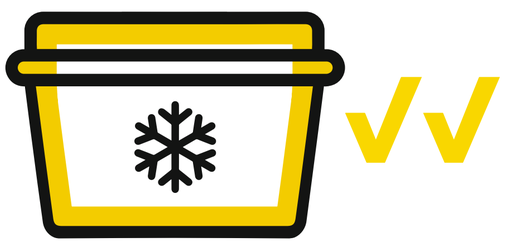
Packaging and Storage

Store dry ice in an insulated container.

The thicker the insulation, the slower it will sublimate (Change from solid to a gas).



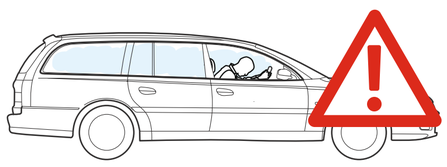
DO NOT store dry ice in a completely airtight container. The sublimation of dry ice to carbon dioxide gas will cause any airtight container to expand or possibly rupture.

Packaging and Safety

Properties of Dry Ice

- Dry Ice will sublime into a gaseous state (Carbon Dioxide).
- Carbon Dioxide is heavier than air and will pool in the bottom of any area in gaseous form.

Precautions

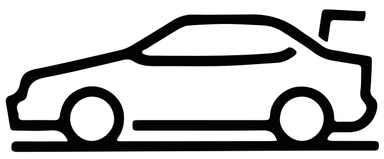


- **AVOID** transporting dry ice in the cab of a truck or the passenger compartment of a car

- Always ensure that there is adequate ventilation during transportation and before entering the load compartment to unload dry ice.

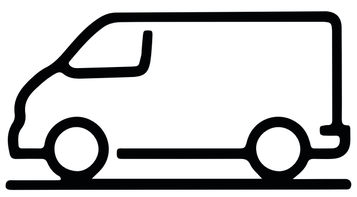
- Unload the product as soon as possible at the end of the journey and move it to a suitable storage location.

Maximum Acceptable Quantities



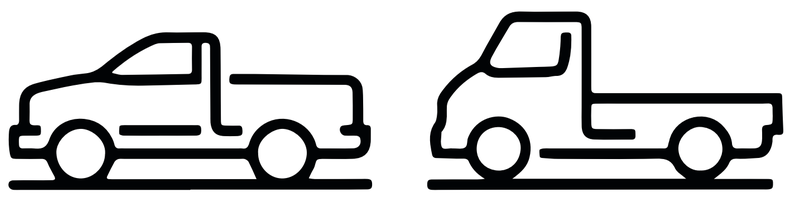
Passenger Vehicles

- 20 kg/Litres in boot compartment.



Vans

- 40 kg/Litres unsealed compartment to driver
- 250 kg/Litres sealed compartment.



Open Vehicles

- Maximum quantities are determined by the legal vehicle carrying capacity.

Placards

Placarding applies when the following volumes are transported:

≥ 500 kg/Litres

Any load of Dry Ice of at least 500 kgs

≥ 250 Litres

Load containing at least 250 litres of flammable, dangerous goods load transported with Dry Ice.

A dangerous goods kit is required if transporting a placarded load.

Additional Information

- When transporting dry ice bins ensure they are adequately secured by using compliant load rated ratchet straps. **Ropes are NOT permitted.**
- BOC/SPW staff will provide guidance to ensure restraint complies with legislative requirements.
- Plan to pick up the dry ice as close to the time it is needed as possible.

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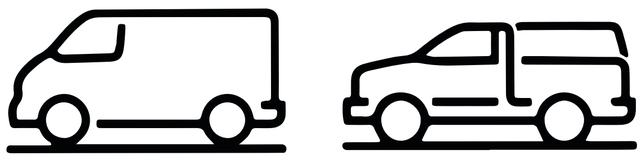
Trade Vehicles with No Constant Ventilation



(ie. Vans, Utes with canopies)

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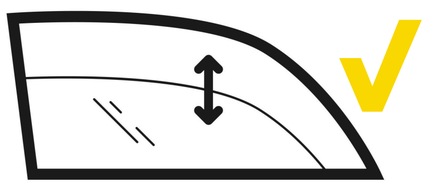

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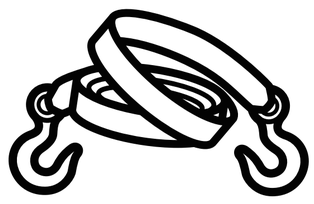
2 Do not leave cylinders in vehicle for long periods.



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Combined Volume

Maximum 250 kg (L)

No more than a total combined volume of 250 kg (L) is permitted within an enclosed space or a passenger compartment, for the following dangerous goods:

Flammable liquids (Class 3)

Flammable solids (Class 4)

Oxidising substances (Class 5)

Toxic substances (Class 6)

Maximum 50 kg (L)

No more than a total combined volume of 50 kg (L) is permitted within an enclosed space or a passenger compartment, for the following dangerous goods:

Flammable Gas (Class 2.1)

Toxic Gas (Class 2.3)

Packing Group I
HIGH DANGER